TRAPPING IN BRITISH COLUMBIA – A SURVEY

Ministry of
Environment
Victoria, B.C.

Wildlife Working Report No. WR-42
January 1989

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R. Reid

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EXECUTIVE SUMMARY

Trapping has a long and rich history in British Columbia. Trappers and fur traders were among the first white men to explore and settle many parts of the province. Trapping remains a very important way of life for many provincial residents and continues to provide income, recreation and animal control in rural areas of the province. Unfortunately, information about the importance of this activity and its contribution to the provincial economy is sparse. To correct this shortcoming, the Wildlife Branch of the provincial Ministry of Environment sponsored a survey of all licensed trappers in the province to determine the economic values associated with trapping during the 1986-87 season. The survey was also designed to provide information about some of the characteristics of trapping.

The economic values of trapping estimated from the survey complement the existing information on the hunting and non-hunting use values to give a more complete picture of the value of wildlife in British Columbia. The information from the survey also makes it possible to more fully represent the value of impacts of land use allocation decisions on trapping. Further, this information can be used in preparing any mitigatory claims that might be put forward. The economic values from the survey can also be used in evaluating any enhancement proposals that would affect furbearers.

The survey questionnaire was sent in April, 1987 to the 2658 trappers holding valid British Columbia trapping licenses. The questionnaire asked trappers about their trapping activity during the 1986-87 season. By the cut-off date of June 30, approximately 39% of the contacted trappers had returned a completed questionnaire.

Based on the responses to the questionnaire, it was found that slightly over 80% of license holders spent time trapping in the 1986-87 season. Among active trappers, 58.5% were holders of registered traplines who had held their traplines for an average of 12.4 years. Of the remaining trappers, some trapped on private property while others trapped on registered traplines given the consent of the trapline holder. The main reason for trapping for 51.6% of trappers was to earn a livelihood. Recreation was indicated by 31.8% as the main reason for trapping followed by wildlife control (9.1%) and tradition (7.2%).

The main source of revenue for trappers was the sale of pelts. Most pelts are sold directly by British Columbia trappers to the auction houses with relatively few pelts being sold to fur traders and taxidermists. For the 1986-87 season, the sale of marten represented over 50% of the gross revenue from pelt sales. The sale of beaver and lynx pelts were the next most important sources of revenue.

Trappers also earned almost $150 000 from the sales of beaver castors, which are used in making perfumes, bear galls used in eastern natural medicine and bear claws used to make jewelry and ornaments. Frequently, trappers use furbearers such as beaver, lynx and muskrat for human and animal consumption. The total estimated market value of furbearers used by trappers for food approaches $200 000. Trappers who used furbearers for human consumption reduced their outlays for meat by an average of over $130 each, while trappers feeding furbearers to dogs saved an average of almost $180 on dog food.

The licensed trappers of British Columbia are estimated to have spent over 5.3 million dollars on the purchase of capital items to be used directly in trapping during the 1986-87 season. The largest capital expenditures were for snowmobiles, vehicles and boats, and the purchase of traplines, composing 27%, 26% and 23% of total capital costs. In addition, provincial trappers incurred annual operating costs for the 1986-87 season of almost 3.3 million dollars, which included the costs of travel, working and maintaining traplines and the selling costs of pelts.

The capital and operating expenditures made by trappers stimulate economic activity throughout the provincial economy. That is, spending on trapping not only affects the business sectors that trappers directly deal with but also has repercussions or ripple effects that are felt throughout the economy. It is estimated that spending on trapping supports 84 man-years of employment. A man-year is the equivalent of a full working year. This employment, in turn, generates almost 2 million dollars in wages and salaries for provincial households.

In assessing the profitability of trapping in the Province, it must be remembered that trappers are not a homogeneous group motivated solely by the income to be earned from trapping. Rather some trap for recreation, tradition or animal control and not for the sole purpose of generating income. Also, among those who do trap for a livelihood there appears to be a good deal of variation in the amount of effort devoted to trapping and dependence on trapping as a source of income. Nevertheless, it is estimated that licensed trappers in British Columbia earned a total net revenue after costs of almost 3.5 million dollars during the 1986-87 season. This represents an average net revenue of over $1500 per active licensed trapper in the Province.

In conclusion, it should be pointed out that most trapping takes place outside the Lower Mainland. For example, approximately 45-50% of trapping activity occurs in the northeastern Omineca-Peace Region of the Province. Almost 96% of expenditures are made by trappers working outside the Lower Mainland Region. The employment and economic activity supported by these expenditures are spread throughout many rural parts of the Province. This provides employment and supplements incomes in many regions where job opportunities are limited.

PREFACE

The purpose of this report is to present the results of a survey, undertaken by the provincial Wildlife Branch, of all licensed trappers in British Columbia. The need for the survey arose from the relatively limited amount of information that is available about trapping in the province. The primary intention of the survey was to determine the economic value of trapping in British Columbia during the 1986-87 season. This was done to obtain a more complete picture of the value of the province's wildlife resources and to be able to better represent trapping interests in land use allocation decisions. In addition, the survey was to provide a better understanding of some characteristics of trapping in British Columbia.

The executive of the British Columbia Trappers Association have been very supportive in endorsing the survey and a number of members of the executive provided valuable comments on preliminary drafts of the questionnaire. Ralph Archibald and other members of the Wildlife Branch have been very helpful at various stages of the study and have even gone so far as to try to explain the trapper (or trapline?) numbering system. Denise Mullen of the Planning and Assessment Branch performed a very competent job of collating and analyzing the returns. However, the greatest thanks has to go to the trappers of the province who took the time and trouble to answer the questionnaire.

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CHAPTER 1. BACKGROUND

1.1 Requirements For Trapping and Fur Trading in British Columbia

In British Columbia, a "furbearer" refers to any fox, badger, beaver, marten, fisher, Canada lynx, bobcat, mink, muskrat, land otter, raccoon, skunk, squirrel, weasel (ermine), wolverine, wolf, coyote and black bear (Wildlife Act, 1982). To trap furbearers a non-native resident of the province must first obtain a trapping license. Natives, as defined by the Indian Act, do not require a license to trap in British Columbia. The fee for a trapping license for the 1986/87 season was $13, which included a $3 surcharge for the Habitat Conservation Fund. Trapping licenses are valid from the date of issue to the following June 30. The annual sales of trapping licenses since the 1971/72 season are shown in the first column of Table 1.1.

In 1926, British Columbia became the first province to introduce a network of registered trapping areas on Crown land. These traplines can be registered in the name of a person who is 19 years of age or older, is a citizen of Canada or has permanent resident status and holds a British Columbia trapping license. The holder of a registered trapline has the exclusive right to trap furbearers in the designated area. The exclusive right to trap on a registered trapline eliminates competition among trappers and permits farming of surplus animals.

No more than one trapline can be registered to an individual. The registration of a trapline neither confers any proprietary rights to its holder nor restricts the rights of others to hunt or capture wildlife where authorized by regulation or permit. Rights to the use of a registered trapline are only granted one year at a time although licenses are typically renewed in favour of the original trapper. The registration of a trapline can be cancelled if its holder fails to renew his trapping license or fails to take a specified minimum harvest from the trapline without permission of the Regional Manager.

The trapping seasons for each furbearer are set out in the annual Synopsis for the eight Environmental Management Regions of the Province (see Figure 1). The setting of seasons is determined by a number of factors including the status of animal populations, species biology and the period of prime pelts. As a result, there tends to be geographical variation in seasons. The Synopsis also sets out regulations on the types of traps and modifications that may be used, required inspection times for holding traps, how certain animals must be trapped and which trapping devices are banned.

As defined by the Wildlife Act, a fur trader is "a person who is engaged in the business of buying, selling or trading in pelts or skins of furbearing animals or other wildlife prescribed for the purpose of this definition, whether as principal, agent or employee, and whether the pelts or skins were obtained, taken or trapped by the fur trader or another person." To engage in fur trading, an individual must first obtain a fur trader license.

TABLE 1.1 Summary of Sales and Revenues of Trapper, Fur Trader Licenses and Royalties Paid[1]

Year	LICENSE SALES			PROVINCIAL REVENUE		
	Trapping Licenses	Resident Fur Trader Licenses	Transient Fur Trader Licenses	Trapping Licenses	Fur Trader Licenses	Fur Royalties Paid
86/87	2,758	68	2	$27,580	$3,800	$ 80,231
85/86	2,704	67	4	27,040	4,150	73,986
84/85	2,856	65	6	28,560	4,250	120,587
83/84	3,345	67	7	33,450	4,750	104,943
82/83	3,090	63	8	30,410	4,850	124,789
81/82	3,195	68	12	15,975	4,100	96,536
80/81	3,178	69	6	15,890	2,325	81,092
79/80	3,246	74	6	16,230	2,450	66,299
78/79	2,971	56	8	14,880	2,200	45,462
77/78	2,916	49	8	14,580	2,025	48,622
76/77	2,777	60 (one license)		13,885	2,025	37,640
75/76	2,492	N/A		12,460	2,025	24,038
74/75	2,599	N/A		12,994	1,800	28,039
73/74	2,664			13,322	2,402	35,879
72/73	2,509			12,543	2,100	35,600
71/72	2,072			10,360	N/A	N/A

[1]Summary of revenue derived from the sale of various licenses, collections, etc., Fish and Wildlife Branch.

In 1986/87, the license fees were $50 for a resident fur trader and $200 for transient fur traders. A transient fur trader is an individual from outside the province who comes to purchase furs in British Columbia. A fur trader license may be issued by a regional manager to an individual who is a Canadian citizen or has permanent residence status. The annual sales of resident and transient fur trader licenses and the revenue they produce are shown in Table 1.1.

Licensed fur traders are required to submit a Fur Traders Return Form stating all wildlife that has been or is in his possession for each calendar month. This form must be submitted within 30 days of the last day of the month referred to in the report. Each registered trapline in the province has an Assigned Trapper Number (ATN) and all trappers working a trapline must use the trapline's ATN in recording pelt sales. In some parts of the province, traplines on private property have also been numbered. The Assigned Trapper Number (ATN) of every provincial trapper from whom furs are received (except furs taken under a hunting license or permit) must be recorded on the monthly Fur Traders Return Form along with the trapper's name and address. These reports along with information from export permits, required to ship pelts out of the province, are used to compile the provincial furbearer harvest statistics that summarize the number of pelts harvested by species for each year.

The person in possession of a skin or pelt of a furbearing animal not raised in captivity is required to pay a royalty for each skin or pelt. Licensed trappers and individuals exempt from holding a license are not liable for the royalty when selling skins or pelts to a fur trader. Also, a furbearer taken by a licensed hunter is exempt from royalty unless the hunter intends to sell the skin or pelt. Any raw pelt or skin of a furbearer shipped out of the province must be accompanied by a Royalty Fur Export Permit. The level of royalties, shown in Table 1.2, are set each July 1 at a level equal to 3% of the national auction price for the species averaged over the previous 5 years. The total amount of fur royalties paid each year since 1972/73 are shown in Table 1.1.

One of the primary purposes of the British Columbia trapping regulations is to ensure that the most humane yet practical trapping methods are practiced. In addition to a long term commitment to the research and development of new, humane traps and trapping techniques, in 1975, British Columbia became the first province to introduce a mandatory trapper education course. The trapper education course, which is offered each year in locations as demand requires, must be successfully completed by anyone wishing to obtain a trapper license for the first time. Among the purposes of this course is to stress the most humane and efficient use of currently available traps. The trappers of British Columbia and the provincial government are among the sponsors of the recently established Fur Institute of Canada, which has become the Canadian centre for developing and promoting trapper education and humane trapping.

TABLE 1.2 Schedule of Fur Royalties, 1986-87

Species	Royalty Level[1]
Beaver	$0.76
Bobcat	4.18
Coyote	1.82
Fisher	4.48
Fox	1.79
Lynx	10.60
Marten	1.31
Mink	0.87
Muskrat	0.14
Otter	1.66
Raccoon	0.70
Skunk	0.10
Squirrel	0.04
Weasel	0.05
Wolf	2.79
Wolverine	6.13
Black Bear	1.50

[1]Set July 1 at a level equal to 3% of the national auction price for the species averaged over the previous 5 years.

1.2 The Market For Fur

The fur market represents an excellent example of how the forces of supply and demand interact to determine the quantities bought and sold and to establish a market price. The supply of furs brought to market will be determined at the primary level of production by the populations of furbearers and the effort made by trappers. The population of some furbearers are cyclical, rising and falling in a regular pattern over a period of years. Perhaps the most marked cycles are displayed by lynx with populations going through a complete cycle every 8 to 11 years. Cyclical changes in furbearer populations can cause significant fluctuations in the supply of some types of fur which in turn causes large variations in the prices paid for the pelts. The supply of raw pelts also depends upon the total effort made by trappers as well as how this effort is directed to different species. Total trapper effort and the species sought depend upon furbearer populations and expected pelt prices as well as some other factors including the availability of alternative forms of employment.

In addition to the number of pelts brought to auction, the price of pelts also depends upon the quality of the fur. The quality of fur is influenced by climate, season, animal's diet and geographical location. A fur pelt is graded on characteristics such as its length, density, lustre and colour as well as the care with which the hide has been cleaned, formed and packed.

The supply of fur reaching the market is also affected by actions at the secondary level of production. The secondary level of the fur industry consists of grading, sorting and resale at auction houses, processing and dying by fur dressers, manufacture into garments by skilled furriers, and sales to consumers through retail outlets. As an example of how the secondary level can affect the supply of furs, manufacturers can vary their inventories to influence the number of different species that are allowed onto the market.

The total demand for fur products is determined by a number of factors, the most important being fur garment prices, income, climate and promotion by the fur industry. As well, in recent years the activities of anti-trapping lobbyists have had a negative effect on the demand for fur garments in some markets. The demand for fur products appears to be sensitive to the levels of employment and income. Part of the explanation for the decline in fur sales during the early 1980's is due to the widespread depression experienced at the time. Not surprisingly, fur products are more attractive to inhabitants of cooler climates. Although the overall level of demand for fur products is influenced by a number of factors, the type of fur that is in favour at any given time seems to be largely determined by fads in the fashion industry.

1.3 Fur Production in Canada

Each year Statistics Canada reports the value of fur pelts produced in Canada in its publication *Fur Production*. The information contained in this publication is based on data provided by the provincial and territorial governments from export permits and fur traders' records. Table 1.3, taken from this report, shows the value of wild and farm raised fur for each province and territory for the 1985/86 season. Ontario produced the greatest value of fur of all the provinces and territories followed by Quebec. British Columbia ranked fourth in the value of total fur production.

The total value of Canadian fur pelt production in the 1985/86 season was almost 100 million dollars, slightly below the previous year's production. The total value of production was split quite evenly between wild and farm-raised fur. By comparison, over two-thirds of the value of British Columbia fur production in 1985/86 was farm raised. The total value of fur production in Canada reached a peak in 1979/80 at about 113 million dollars. The value of fur production fell in the years following 1979/80 although it recovered somewhat in 1984/85 and 1985/86.

TABLE 1.3 The Value of Fur Production by Province, 1985/86[1]

	WILD FUR	RANCH RAISED	TOTAL
Newfoundland	$ 565,260	$ 456,490	$ 1,021,750
Prince Edward Island	151,425	1,657,393	1,808,818
Nova Scotia	822,202	10,033,484	10,855,686
New Brunswick	1,440,129	2,102,355	3,542,484
Quebec	8,783,024	7,597,662	16,380,686
Ontario	14,368,665	18,125,122	32,493,787
Manitoba	5,061,210	1,708,792	6,769,502
Saskatchewan	5,007,639	102,454	5,110,093
Alberta	6,631,285	1,181,926	7,813,211
British Columbia	3,179,386	6,404,929	9,584,313
Northwest Territories	3,239,201	-	3,239,201
Yukon	958,267	-	958,267
	$50,207,693	$49,370,105	$99,577,798

[1]Source: Statistics Canada, *Fur Production, 1985-86.*

Table 1.4 summarizes the number and value of wild pelts produced in British Columbia for the 1984/85 and 1985/86 seasons. As can be seen from the table, marten produced the greatest amount of revenue for provincial trappers in both seasons followed by lynx. Other valuable species in British Columbia were beaver, coyote, fisher and mink. In the 1984/85 season, more marten were harvested in British Columbia than in any other province or territory. The British Columbia harvests of lynx in both seasons were only exceeded by the harvests in Quebec.

The decrease in the number and value of wild pelts produced in British Columbia between 1984/85 and 1985/86 was also experienced in most other provinces and territories although the fall in British Columbia was more pronounced. Most of the fall in the B.C. wild fur production between the two seasons can be explained by the decrease in marten and lynx production from 1984/85 to 1985/86. The produced values of some of the other species increased between the 2 years while others decreased but none approached the relative importance of marten and lynx.

TABLE 1.4 Number and Value of Wild Fur Pelts Produced in British Columbia, 1984-85 and 1985-86[1]

	1984-85			1985-86		
	NUMBER	VALUE	AVERAGE VALUE	NUMBER	VALUE	AVERAGE VALUE
Black Bear	364	$16,740	$45.99	343	$16,330	$47.61
Grizzly Bear	8	3,552	444.00	8	3,600	450.00
Beaver	13,297	335,616	25.24	13,668	424,118	31.03
Cougar	15	2,685	179.00	15	3,187	212.47
Coyote	3,460	153,589	44.39	2,783	143,770	51.66
Ermine (Weasel)	8,058	19,259	2.39	3,600	8,208	2.28
Fisher	630	104,788	166.33	489	81,042	165.73
Fox	764	28,765	37.65	450	11,844	26.32
Lynx	1,668	1,121,196	672.18	1,206	794,428	658.73
Marten	45,130	2,769,628	61.37	24,909	1,407,358	56.50
Mink	3,130	100,761	32.11	2,832	91,445	32.29
Muskrat	14,841	43,187	2.91	10,693	30,582	2.86
Otter	673	28,178	41.87	650	22,990	35.37
Raccoon	978	15,452	15.86	1,337	32,690	24.45
Skunk	23	77	3.35	55	182	3.31
Squirrel	31,663	27,230	0.86	29,573	19,518	0.66
Wildcat	271	54,281	200.30	134	25,952	193.67
Wolf	232	15,950	68.75	156	12,712	81.49
Wolverine	260	56,074	215.67	210	49,430	235.38
Total	125,473	4,897,008	-	93,111	3,179,396	-

[1]Source: Statistics Canada, Fur Production, 1985-86.

An example of the sharp fluctuations in the price and output of raw fur is given in Table 1.5, which presents the annual Canadian production of selected species since 1970/71 as well as the average prices paid. As can be seen from the table, fur production tends to be cyclical rising and falling from year to year or over a period of years. The levels of production in most cases coincide with price movements or follow price changes with a lag of 1 or 2 years. For example, the production of beaver began to rise following the 1977/78 season as prices increased reaching peak prices and production in the 1979/80 season. In subsequent years, prices and production fell reaching a

trough in 1982/83. Lynx is an interesting example because production is affected by distinct cycles in animal populations as well as price incentives. An examination of the historical record shows that lynx production peaks in the early years of a decade and reaches a trough in the mid-years of the decade. It appears that the demand for lynx remained very strong in 1984/85 and 1985/86 as production fell, which led to very high prices for lynx.

1.4 Survey Design

The questionnaire for the trapper survey was intended to be as simple as possible to answer while providing the required information. A draft of the questionnaire was reviewed by members of the executive of the British Columbia Trappers Association as well as by regional and headquarters staff of the Wildlife Branch. The reviewers provided a number of helpful comments and suggestions that were incorporated into the final draft of the questionnaire. Since the questionnaire asked trappers to provide financial data about their costs and returns, it was felt that returned questionnaires should be anonymous to reduce any apprehensions trappers might have about providing this information. This precluded any follow-up of trappers who had not completed

TABLE 1.5 Number and Average Value of Raw Fur, Canada, 1970/71 to 1985/86[1]

	BEAVER		MARTEN		LYNX		COYOTE	
YEAR	NUMBER	AVERAGE VALUE	NUMBER	AVERAGE VALUE	NUMBER	AVERAGE VALUE	NUMBER	AVERAGE VALUE
1970-71	355,379	$12.55	52,312	$ 7.90	42,365	$27.32	28,462	$12.70
71-72	375,213	17.18	56,231	8.33	53,589	38.07	46,500	15.64
72-73	452,275	21.92	61,109	13.61	53,400	88.76	78,148	28.06
73-74	421,071	21.55	62,356	14.55	35,372	86.83	87,139	36.37
74-75	357,732	16.75	47,598	11.31	20,648	112.94	44,366	31.93
75-76	334,924	20.07	53,108	17.15	13,162	216.18	61,779	50.99
76-77	404,625	24.31	102,628	19.92	15,132	219.24	65,819	59.76
77-78	397,125	20.05	115,905	21.59	21,131	267.07	69,786	57.85
78-79	446,416	34.97	139,123	31.70	28,987	347.96	78,725	103.56
79-80	602,044	43.34	176,343	27.70	34,366	224.26	64,372	64.58
80-81	522,966	32.02	151,710	30.35	34,502	272.95	45,569	73.95
81-82	382,893	22.28	160,258	36.23	42,811	265.12	66,454	70.11
82-83	335,711	20.25	139,638	40.98	29,533	289.21	73,594	55.15
83-84	323,877	21.37	154,515	53.18	13,445	340.92	65,364	45.53
84-85	371,685	30.13	161,168	58.02	8,625	611.38	82,258	59.70
85-86	423,198	34.96	182,088	49.36	6,739	607.03	55,364	60.46

[1]Source: Statistics Canada, *Fur Production, 1985-86.*

and returned a questionnaire. As a consequence, it was impossible to test whether the behaviour of those who completed and returned the questionnaire differed from those who did not. While the evidence about "response bias" is mixed, it may be that trappers who returned the questionnaire are more dedicated and enthusiastic and put more effort into trapping. If this is the case then using the sample of returned responses to represent the behaviour of all trappers will lead to an over-estimate of the amount and value of trapping activity in the province. It appears that the likelihood of a response bias in a survey and the size of the response bias both increase the lower the rate of response to the questionnaire.

The questionnaire, shown as Appendix 1, was sent to 2658 licensed trappers in mid-April of 1987 asking them about their trapping activity during the 1986/87 season. Unfortunately, it was necessary to restrict the survey to licensed trappers since no information was available about the names and addresses of unlicensed native trappers. As a consequence, all the results presented below refer to the behaviour of licensed trappers. Trappers could return their completed questionnaires in postage-paid, self-addressed return envelopes. Of the total number of questionnaires sent out, 355 were returned to sender as undeliverable. Nine hundred and five completed questionnaires were received by the cut-off date of June 30. Table 1.6 shows the breakdown of the sample of returned questionnaires according to whether trappers were active or not and the region trapped by active trappers. The returned questionnaires represent a response rate of about 39% of delivered questionnaires. The number of trappers that answered each of the questions in the questionnaire are shown in Table 1.7 The completed questionnaires were then edited to correct any obvious errors and remove any apparent outliers. The key punching of the questionnaires was verified using a data dump.

TABLE 1.6 Sample of Returned Questionnaires

	NUMBER OF RESPONSES	NUMBER OF LICENSE HOLDERS
1. INACTIVE 1986-87	175	
2. ACTIVE 1986-87		
Region Trapped		
Vancouver Island	36	142
Lower Mainland	39	175
Thompson-Nicola	45	219
Kootenay	148	418
Cariboo	97	315
Skeena	108	346
Omineca-Peace	198	882
Okanagan	26	161
No Region Specified	33	
TOTAL	905	2658

TABLE 1.7 Number of Responses by Question

QUESTION NUMBER	NUMBER RESPONDING
1. (a)	868
(b)	868
2. (a)	882
(b)	508
3.	881
4. (a)	887
(b)	697
5.	712
6.	622
7. (i)	647
(ii)	590
(iii)	593
8. (i)	640
(ii)	588
(iii)	552
(iv)	625
9.	671

CHAPTER 2. NUMBER AND CHARACTERISTICS OF BRITISH COLUMBIA TRAPPERS

2.1 Trapping Experience

Table 2.1 shows the percentage breakdown of the number of years provincial trappers have been trapping in total as well as the number of years spent trapping in British Columbia. British Columbia trappers have an average of 17.1 years of total trapping experience and have spent an average of 15.2 years trapping in British Columbia.

2.2 Registered Trapline Holders

Of the trappers responding to the questionnaire, 58.5% indicated they had a trapline registered in their name. Table 2.2 shows the percentage breakdown of trapline holders according to the number of years they had held their traplines. Registered trapline holders have had their traplines for an average of 12.4 years.

In some instances, a trapper who is not a holder of a registered trapline will work a trapline given the consent of the trapline holder. Trappers who are not holders of registered traplines whether they trap on private property or traplines held by other trappers will be referred to as "non-registered trapline holders" or "NRTH trappers" in what follows to distinguish them from registered trapline holders.

2.3 Estimated Number of Active Trappers, 1986-87

Slightly over 80% of the trappers who responded to the questionnaire stated that they trapped in British Columbia during the 1986-87 season. Trappers holding a registered trapline were more likely to be active than were trappers who did not hold a trapline. Over 92% of trapline holders claimed to have been active whereas only about 66% of NRTH trappers trapped during 1986-87.

Table 2.3 shows the estimated number of registered trapline holders and NRTH trappers that were active during the 1986-87 season according to region. The estimates are based on the sales of licenses and the percentage of trappers that reported actively trapping during the season. As can be seen from the table, trappers are more likely to live and trap in the Kootenays and the three northern regions of the Cariboo, Skeena and Omineca-Peace than in the southern regions. Almost one-third of the province's active trappers are from the Omineca-Peace Region. Furthermore, almost 80% of the licensed trappers active during 1986-87 were registered trapline holders. The Lower Mainland was the only region where the number of trappers who did not hold a trapline exceeded the number of registered trapline holders. Finally, very few trappers (less than 3%) stated that they trapped in more than one region.

TABLE 2.1 Years of Trapping Experience

YEARS OF EXPERIENCE	TOTAL YEARS		YEARS IN B.C.	
	%	Cumulative %	%	Cumulative %
1 - 5 years	27.6%	27.6%	31.5%	31.5%
6 - 10	20.3	48.0	20.8	52.3
11 - 15	13.4	61.3	13.4	65.6
16 - 20	8.6	69.9	9.5	75.1
21 - 25	4.2	74.1	4.4	79.6
26 - 30	7.0	81.1	5.1	84.6
31 - 35	2.5	83.6	2.5	87.2
36 - 40	5.0	88.6	4.0	91.2
41 - 45	3.1	91.7	2.2	93.4
46 - 50	4.2	95.9	3.8	97.1
51 - 55	1.7	97.6	1.0	98.1
56 - 60	1.2	98.8	0.9	99.0
61 - 65	0.9	99.7	0.8	99.8
66 - 70	0.3	100.0	0.2	100.0

TABLE 2.2 Number of years on registered traplines

YEARS OF REGISTRATION	PERCENT	CUMULATIVE PERCENT
1 - 5 years	38.4%	38.4%
6 - 10	22.6	61.0
11 - 15	12.8	73.8
16 - 20	7.9	81.7
21 - 25	3.5	85.2
26 - 30	4.1	89.3
31 - 35	1.8	91.1
36 - 40	3.1	94.2
41 - 45	2.6	96.8
46 - 50	1.9	98.7
Over 50 years	1.3	100.0

TABLE 2.3 Estimated Number of Active Licensed Trappers, 1986-87

	REGISTERED TRAPLINE HOLDERS	NRTH TRAPPERS	TOTAL
Vancouver Island	91	28	119 (5.3%)
Lower Mainland	59	73	132 (5.8%)
Thompson-Nicola	168	24	192 (8.5%)
Kootenay	350	25	375 (16.6%)
Cariboo	203	62	265 (11.7%)
Skeena	250	49	299 (13.2%)
Omineca-Peace	557	183	740 (32.7%)
Okanagan	117	22	139 (6.2%)
British Columbia	1795	466	2261 (100.0%)

2.4 Purpose of Trapping

Trappers were asked to indicate what was the main purpose of their trapping. The following list shows the percentage breakdown of the main purposes for trapping according to those trappers who provided a response.

MAIN PURPOSE FOR TRAPPING

	Percent
(i) Livelihood	51.6%
(ii) Recreation	31.8
(iii) Wildlife Control	9.1
(iv) Tradition	7.2
(v) Other	0.3

As can be seen from the list, just over one-half of trappers indicated that a livelihood was the main reason for their trapping. Recreation was the second most commonly mentioned reason for trapping accounting for almost one-third of all provincial trappers.

As might be expected, it was more common for holders of registered traplines than NRTH trappers to mention livelihood as the main purpose of trapping. Livelihood was given as the main purpose of trapping by 61% of registered trapline holders while recreation was indicated by about 24%. By comparison, recreation was the main purpose of trapping for about 44% of NRTH trappers whereas livelihood was indicated by 37%.

There was a greater tendency for trappers who trapped during the 1986-87 season to indicate livelihood as the main purpose of trapping than was the case for inactive trappers. Among trappers active in 1986-87, about 56% mentioned livelihood as the main purpose of trapping whereas 28% indicated recreation. For trappers inactive in 1986-87, almost 48% said recreation was their main purpose while 33% gave livelihood.

There were also some differences in the main reasons for trapping according to the region in which the trapper lived (not shown). Trappers in the Vancouver Island and Kootenay regions indicated recreation as the main purpose for trapping more frequently than livelihood. In all other regions, livelihood was the most commonly stated reason for trapping. It is interesting that in the Vancouver Island Region trapping for animal control closely followed recreation and was mentioned more frequently than livelihood as the main purpose of trapping.

Approximately one-third of trappers provided a second reason or purpose for trapping in addition to the primary one. The percentage breakdown for the second purpose given was: 33.2% - wildlife control; 32.8% - recreation; 26.9% - tradition; 4.2% - livelihood; and 2.9% - other. It would appear that many who trap for their livelihood feel that recreation, animal control and tradition are also important aspects of trapping.

CHAPTER 3. ESTIMATED HARVEST OF FURBEARERS

3.1 Average Harvest by Species

Table 3.1 shows the average number of each species trapped or shot by region for trappers who reported harvesting the particular species. It should be cautioned that some of the entries in the table are based on harvests by a small number of trappers. As a result, the reported average harvest in some cases may not be very representative of all trappers. To aid the reader, the averages that are based on responses by less than 10 trappers are denoted by an asterisk.

The highest average harvests of beaver were taken in the Cariboo and Omineca-Peace regions. The highest average harvest of lynx was taken in the Thompson-Nicola Region. The Omineca-Peace Region lead in the average harvest of marten. The highest average harvest of mink occurred in the Vancouver Island Region followed by the Cariboo Region. Trappers in the Lower Mainland Region had a significantly higher average harvest of muskrat than trappers in any other region. The high average harvest of raccoon in the Vancouver Island Region probably reflects the greater stress that trappers in this region place on animal control as discussed earlier in this report.

A comparison was made of the reported average harvests by NRTH trappers and holders of registered traplines. This is shown in Table 3.2. For most species, the average harvest by trapline holders was greater than the harvest for NRTH trappers. However, there were a few exceptions. One such exception was muskrat with NRTH trappers having a higher average harvest than trapline holders. This is probably due to the exceptionally high average harvest of muskrat in the Lower Mainland Region, shown in Table 3.1, where about 64% of the licensed trappers are NRTH trappers. NRTH trappers also took more raccoons and skunks on average than did trapline holders. Both species are primarily nuisance animals and are taken for wildlife control.

3.2 Estimated Total Harvest

The total harvest of furbearers for 1986-87 was estimated by expanding the harvests reported in the returned questionnaires to the estimated number of active trappers in each region shown in Table 2.3. The resulting estimates according to species are shown in Table 3.3. The estimates shown in the table highlight the importance of trapping in the Omineca-Peace Region of the province. Among the species, marten, muskrat, beaver, lynx and mink generate the greatest amount of revenue for provincial trappers as will be shown below. Almost one-half of the provincial harvest of marten was taken in the Omineca-Peace Region. The largest harvest of muskrat was taken in the Lower Mainland Region followed by the harvests in the Omineca-Peace and Cariboo

TABLE 3.1 Average Harvests of Successful Trappers, 1986-87

	REGION								
	VAN. ISL.	LOW. MAIN.	THOMP. NIC.	KOOT-ENAY	CARI-BOO	SKEENA	OMIN. PEACE	OKAN-AGAN	PROV. AVRGE.
1. Beaver	10.4	11.9	10.8	9.6	22.4	17.7	20.9	12.7	16.7
2. Black bear	2.0*	1.8*	1.6*	1.3	2.2	1.5	2.6	1.5*	2.1
3. Bobcat	-[1]	3.3*	1.8	1.2	1.6*	*	3.5*	3.3*	2.4
4. Coyote	-	4.3	6.2	4.3	7.1	3.9	6.2	12.1	6.0
5. Fisher	-	-	2.9	-	3.1	1.8	2.1	-	2.6
6. Fox	-	-	2.0	1.0*	3.5	2.5	1.9	-	2.6
7. Lynx	-	-	5.8*	2.3	3.0	2.7	4.7	4.0	4.1
8. Marten	29.8	14.0	31.4	21.3	23.7	17.7	36.8	18.1	26.4
9. Mink	13.3	5.8	6.8	2.9	8.6	4.6	5.5	3.2	6.1
10. Muskrat	21.0*	81.0	29.9	18.4	32.1	12.5	15.9	6.6	25.9
11. Otter	3.8	2.7	2.5*	1.5	2.1	2.7	3.3	1.5*	2.7
12. Raccoon	13.3	7.4	-	1.4*	4.5*	9.5*	-	3.0*	8.5
13. Skunk	-	4.7*	11.3*	5.0*	-	1.0*	1.0*	7.5*	4.7
14. Squirrel	7.5*	10.1	41.3	13.3	66.3	42.5	58.9	22.5	46.6
15. Weasel	2.6*	5.3*	9.5	6.5	15.9	13.2	13.6	10.2	11.8
16. Wolf	3.2*	-	-	-	1.7	2.1	4.3	-	3.7
17. Wolverine	-	-	1.0*	1.7	1.5*	1.5	1.8	1.3*	1.8

[1]- indicates no reported harvest or harvest by a single trapper
* average based on harvests of between 2 and 9 trappers

TABLE 3.2 Average harvests of successful trappers, Trapline holders vs. NRTH

	REGISTERED TRAPLINE TRAPPERS	NRTH TRAPPERS	ALL TRAPPERS
1. Beaver	18.7	12.5	16.7
2. Black bear	2.2	1.5	2.1
3. Bobcat	2.4	2.6*	2.4
4. Coyote	7.1	4.1	6.0
5. Fisher	2.9	1.5	2.6
6. Fox	2.7	2.4	2.6
7. Lynx	4.2	3.5	4.1
8. Marten	28.3	19.8	26.4
9. Mink	6.8	4.5	6.1
10. Muskrat	23.8	29.8	25.9
11. Otter	3.0	1.9	2.7
12. Raccoon	7.3	10.3	8.5
13. Skunk	3.7	11.3*	4.7
14. Squirrel	52.1	30.1	46.6
15. Weasel	12.9	9.7	11.8
16. Wolf	6.0	1.7	4.6
17. Wolverine	1.8	1.7	1.8

* Average based on harvests of less than 10 trappers

TABLE 3.3 Estimated Total Harvest of Furbearers, 1986-87

	REGION								
	VAN. ISL.	LOW. MAIN.	THOMP. NIC.	KOOT-ENAY	CARI-BOO	SKEENA	OMIN. PEACE	OKAN-AGAN	PROV. TOTALS
1. Beaver	653	1206	1477	1707	4542	3432	12065	1300	26382
2. Black bear	19	30	42	53	131	74	512	48	909
3. Bobcat	-	101	76	58	21	58	26	144	484
4. Coyote	-	206	858	672	1263	396	2236	1102	6733
5. Fisher	-	3	123	2	237	88	362	5	820
6. Fox	-	-	85	5	349	210	366	5	1020
7. Lynx	-	3	175	96	163	177	938	214	1766
8. Marten	2755	571	3223	7240	4089	3941	21205	1744	44768
9. Mink	924	436	439	366	1365	675	2247	246	6698
10. Muskrat	415	6574	2173	1166	4392	1254	5179	535	21688
11. Otter	165	91	76	53	122	199	568	32	1306
12. Raccoon	1006	601	25	25	24	53	-	80	1814
13. Skunk	33	63	145	50	8	8	18	80	405
14. Squirrel	99	341	4060	2355	9593	6251	28648	1808	53155
15. Weasel	42	145	811	1085	2222	1620	5972	711	12608
16. Wolf	52	6	102	53	46	110	617	-	986
17. Wolverine	-	9	8	126	32	72	276	21	544

[1] - Indicates no reported harvest

Regions. In the case of beaver, a significant share of the harvest was taken in the Omineca-Peace Region with the remaining harvest spread throughout the province. The Omineca-Peace also lead in the harvests of lynx and mink.

It must be pointed out that the estimated harvest of furbearers shown in Table 3.3 is noticeably greater than the harvest reported in the *Wild Fur Harvest System*. The amount by which the estimates shown in Table 3.3 exceeds the reported harvest varies depending upon the species. For some species such as beaver, marten and fox, the estimated harvests are less than 50% greater than the reported harvests. However, the estimated harvests of species such as mink, bobcat, raccoon and weasel are more than double the reported harvests. The reason why the estimated harvest overstates the "true" harvest of furbearers is probably due to the design of the survey. As discussed in section 1.4, since the survey was anonymous, it was impossible to contact trappers who did not return a questionnaire to ask them about their trapping activity in the 1986/87 season. This meant that it was necessary to base estimates on returned questionnaires. However, trappers who took the time to complete and return a questionnaire were more likely to be active and probably devoted greater effort to trapping than the typical trapper. Therefore, estimates of the behaviour of all trappers based on the sample of returned questionnaires likely overstate the number of active trappers and their average harvests and as a result the total harvest of furbearers.

One alternative to presenting the estimated harvest from the sample of returned questionnaires is to use the reported harvest from the *Wild Fur Harvest System*. However, the harvest is used to determine gross revenue from pelt sales in Section 6.1 which, in turn, is used to find the net revenues, after costs, from trapping. Since the harvest appears to be overestimated, it is likely that, for the same reasons, the total costs of trapping are also overestimated. If harvests and costs of trapping are overestimated by the same amount in the survey, then the use of these estimates gives a more accurate measure of net revenue from trapping than would be the case if the reported harvest was used in the calculation.

3.3 Distribution of Trappers by Size of Harvest

The survey did not ask trappers how much time or effort they devoted to trapping during the 1986-87 season. However, the amount of time trappers spend on trapping apparently varies a great deal with some only trapping a few nuisance animals in a season while others depend on trapping as an important source of income. One imperfect measure of the variation in effort devoted to trapping is the distribution of trappers according to the number of furbearers harvested. The problem with using the total harvest as a proxy measure of effort is that it gives equal weight to all species. For example, a trapped squirrel does not have the same significance as a lynx. Nevertheless, Table 3.4 shows the percentage distribution of trappers according to the total number of furbearers trapped or shot by trappers reporting a harvest in 1986-87. The results shown in the table provide an indication of the wide variation in the effort and harvest by trappers. Of the trappers who reported harvesting furbearers in 1986-87, 14.5% had a total harvest of 10 or less animals while 4.6% had harvests of 300 or more.

TABLE 3.4 Percentage Distribution of Trappers by Total Harvest

TOTAL NUMBER OF ANIMALS HARVESTED	% OF TRAPPERS	CUMULATIVE % OF TRAPPERS
10 or less	14.5%	14.5%
11-20	11.9	26.4
21-30	10.5	36.9
31-40	9.7	46.6
41-50	8.7	55.3
51-60	5.1	60.4
61-70	5.2	65.6
71-80	5.0	70.6
81-90	3.3	73.9
91-100	3.1	77.0
101-150	9.8	86.8
151-200	4.8	91.6
201-300	3.8	95.4
300 and over	4.6	100.0

CHAPTER 4. SALE AND USE OF FURBEARER PELTS AND PARTS

4.1 Estimated Pelt Sales to Different Types of Buyers

Most pelts from the furbearer harvest reported in the previous section were sold to the auction houses. In some cases, trappers may have kept pelts to make fur garments and handicrafts for their families and friends. It is estimated that over 93% of the pelts sold by licensed provincial trappers were sold to auction houses. Of the remaining pelt sales, approximately 6% were to private buyers, 1% to taxidermists and well under 1% to travelling fur buyers. Table 4.1 summarizes the number of trappers who sold pelts to the different types of buyers as well as the average and total number of pelts sold to buyers.

As the results in the table reveal not only did a high proportion of trappers sell pelts to auction houses but also the average sales for trappers selling to auction houses were greater than the average sales to other types of buyers. However, trappers in the Skeena and Omineca-Peace regions were apparently more likely to sell pelts to private buyers than were trappers in the southern regions. Over 70% of the pelts sold to private buyers were by trappers from the two northern regions. In addition, the average number of pelts sold to private buyers by trappers in the Skeena Region was almost as great as the average sales to auction houses. The small number of trappers selling pelts to travelling fur buyers was almost exclusively from the Omineca-Peace Region. Nevertheless, trappers sold very few pelts both on average and in total to travelling fur buyers.

TABLE 4.1 Estimated Pelt Sales to Different Types of Buyers

	TRAVELLING FUR BUYER	AUCTION HOUSE	PRIVATE BUYER	TAXIDERMIST
1. Number of trappers selling to:	32	1,853	317	197
2. Total pelts sold	48	159,700	10,400	740
3. Average sales per trapper	1.5	86.2	32.6	3.7

4.2 Estimated Sales of Castors, Galls and Claws

Castoreum (castors) are the scent glands of beavers. These are dried by trappers and sold at the wild fur auctions for use in perfume. Bear galls are the gall bladders of bears that are dried and sold at auction. Bear galls are used for a number of purposes in eastern "natural" medicine. Bear claws are graded according to size and sharpness and sold at auction. Bear claws are used mainly for jewelry. Trappers were asked if they sold any castoreum (castors), bear galls or bear claws, and, if so, the amounts that were sold.

4.2.1 Castors

Table 4.2 shows the estimated number of trappers that sold castors from the 1986-87 season and the average and total weights sold. Approximately 20% of trappers active in the province during 1986-87 sold castors. The percentages of trappers in the Lower Mainland, Kootenay and Omineca-Peace regions that sold castors were above the provincial average. Of the estimated 455 provincial trappers that sold castors, 380 were holders of registered traplines and 75 were NRTH trappers.

TABLE 4.2 Estimated Sales of Castors, Bear Galls and Bear Claws, 1986-87

	Castors			Bear Galls			Bear Claws		
	No. of Trappers	Total Wt. Sold(g)	Avg. Wt. Sold/ Trapper(g)	No. of Trappers	Total Wt. Sold(g)	Avg. Wt. Sold/ Trapper(g)	No. of Trappers	Total Wt. Sold(g)	Avg. Wt. Sold/ Trapper(g)
Vancouver Island	11(9)[1]	15,829	1439	0(-)[1]	0	0	4(3)[1]	80	20
Lower Mainland	38(29)	25,612	674	4(3)	400	100	0(-)	0	0
Thompson-Nicola	34(18)	34,102	1003	31(16)	877	28	5(3)	200	40
Kootenay	32(9)	18,944	592	17(5)	646	38	3(1)	60	20
Cariboo	74(28)	70,448	952	41(15)	2050	50	10(4)	400	40
Skeena	54(18)	101,196	1874	21(7)	1470	70	23(8)	1058	46
Omineca-Peace	189(26)	337,176	1784	144(19)	23472	163	102(14)	3876	38
Okanagan	23(17)	32,499	1413	25(18)	338	13.5	13(9)	520	40
British Columbia	455(20)	635,806	1397	283(13)	29253	103	160(7)	6194	39

[1]Percent of Region's trappers in brackets

British Columbia trappers are estimated to have sold over 635 000 grams of castors from the 1986-87 season. Of this total, over one-half was sold by trappers from the Omineca-Peace Region. Trappers sold an average of almost 1400 grams of castors although trappers from the Omineca-Peace and Skeena regions tended to sell slightly greater amounts. Also, registered trapline holders selling castors sold an average of about 1470 grams whereas NRTH trappers sold an average of 1075 grams.

4.2.2 Bear galls

An estimated 283 trappers or about 13% of active trappers sold bear galls from the 1986-87 season. These trappers sold over 29 000 grams of galls or an average of 103 grams per trapper. Table 4.2 shows the distribution by region of trappers selling bear galls as well as the average and total weights sold. Trappers in the Omineca-Peace Region make up over one-half of the number of trappers selling bear galls and account for over 80% of the weight of galls sold. Of the trappers selling bear galls from the 1986-87 season, over 90% were holders of registered traplines and their sales composed almost 92% of the weight of galls sold.

4.2.3 Bear claws

It is estimated that about 160 provincial trappers or 7% of all active trappers sold bear claws from the 1986-87 season. Provincial trappers sold almost 6200 bear claws or an average of about 39 bear claws per trapper. Table 4.2 shows the regional distribution of trappers selling bear claws as well as the total and average sales. Again, the most sales were by trappers from the Omineca-Peace Region. Also, the most sales of bear claws were by registered trappers accounting for over 90% of the sales.

4.3 Trapped Animals Used for Food, Feeding Stations and Bait

Trappers were asked if they used any trapped animals for either human or animal consumption or for feeding stations or bait. Table 4.3 shows the estimated number of trappers that used trapped animals for these different purposes during the 1986-87 season according to region. It is common for trappers to use trapped animals as bait for attracting other animals. In addition, almost one-quarter of trappers used furbearers as food for human consumption and over 30% used their harvest to feed domestic animals. It was more usual for holders of registered traplines to use trapped animals for other purposes than it was for NRTH trappers. Table 4.4 shows the percentages of trapline holders and NRTH trappers that used trapped animals for human consumption, animal food, feeding stations and bait.

It is estimated that trappers used over 74 000 kg (160 000 pounds) of trapped animals for human and animal food. This is shown in Table 4.5, which reports the estimated average and total weight of furbearers used as

TABLE 4.3 Number of Trappers Using Harvest for Other Purposes (Numbers in brackets are percents of active trappers in region)

	Food for Human Consumption	Food for Domestic Animals	Feeding Stations	Bait
Vancouver Island	26 (22%)	17 (14%)	20 (17%)	56 (47%)
Lower Mainland	54 (41%)	51 (39%)	44 (33%)	98 (74%)
Thompson-Nicola	38 (20%)	60 (31%)	56 (29%)	137 (71%)
Kootenay	35 (9%)	53 (14%)	91 (24%)	263 (70%)
Cariboo	57 (22%)	115 (43%)	93 (35%)	180 (68%)
Skeena	91 (30%)	97 (32%)	72 (24%)	180 (60%)
Omineca-Peace	194 (26%)	284 (38%)	251 (34%)	482 (65%)
Okanagan	32 (23%)	37 (27%)	43 (31%)	107 (77%)
British Columbia	527 (23%)	714 (32%)	670 (30%)	1503 (66%)

food for human and animal consumption by region. The large amounts of furbearers used for food represent a significant savings on food purchases as is shown in Section 6.3. Trappers in the Omineca-Peace Region consumed almost one-half of the total weight by humans and over 56% of the animal consumption. Trappers on registered traplines used greater amounts of furbearers on average and in total than did NRTH trappers for both human and animal consumption. Registered trapline holders used an average of 35 kg (77 pounds) for human consumption and 91 kg (201 pounds) for animal feed compared to 18 and 48 kg (39 and 106 pounds), respectively, by NRTH.

TABLE 4.4 Percents of Trapline Holders and NRTH Trappers Using Harvests for Other Purposes

	Food for Human Consumption	Food for Domestic Animals	Feeding Stations	Bait
Trapline Holders	27%	34%	35%	70%
NRTH	13%	24%	17%	59%

TABLE 4.5 Amounts of Harvest Used for Food for Human and Domestic Animal Consumption

	HUMAN CONSUMPTION		ANIMAL CONSUMPTION	
	Avg. kg (lbs.) / trapper	Total wt. kg(lbs.)	Avg. kg (lbs.) / trapper	Total wt. kg(lbs.)
Vancouver Island	23(51)	607(1,336)	42(93)	718(1,579)
Lower Mainland	19(42)	1,024(2,252)	46(101)	2,346(5,161)
Thompson-Nicola	9(20)	347(764)	64(141)	3,840(8,448)
Kootenay	15(33)	520(1,145)	45(98)	2,366(5,205)
Cariboo	20(43)	1,101(2,423)	67(147)	7,700(16,939)
Skeena	42(93)	3,876(8,527)	60(131)	5,763(12,678)
Omineca-Peace	42(93)	8,214(18,080)	45(254)	32,776(72,108)
Okanagan	29(63)	916(2,016)	74(162)	2,720(5,983)
British Columbia	31(69)	16,610(36,543)	81(179)	58,229(128,101)

CHAPTER 5. ESTIMATED COSTS OF TRAPPING

It is estimated that licensed trappers of British Columbia spent between 8 and 9 million dollars on the goods and services required for their trapping activities during the 1986-87 season. The following two sections report estimates of the capital and annual operating costs incurred by provincial trappers. Capital costs refer to purchases of capital equipment that would typically be used for a number of years. As a result, a trapper would not be expected to buy the capital equipment each year. Operating costs refer to purchases of goods and services required for trapping that trappers would have to make each year. For a few items, this distinction between capital and operating costs can be blurred with some trappers purchasing an item each year whereas the same equipment would last other trappers a number of years.

5.1 Value of Capital Purchases

The licensed trappers of British Columbia are estimated to have spent over 5.3 million dollars on capital items to be used directly in trapping during the 1986-87 season. The breakdown of capital expenditures is shown in Table 5.1 according to region. The largest capital expenditures were for snowmobiles, vehicles and boats, and the purchase of traplines composing 27%, 26% and 23% of total capital costs. The vehicles and boats most frequently specified were 4x4 trucks, aluminium boats, canoes and 3-wheel ATV's. The capital value of vehicles and boats attributable to trapping was found by multiplying the purchase price by the proportion of time that the vehicle or boat was used for trapping. There was a wide variation in the percent of boat and vehicle use that was devoted to trapping. For some trappers less than 10% of the use of vehicles or boats was for trapping while others used them exclusively for trapping. For all trappers, 59% of the use of their boats and vehicles was for trapping. Among the items specified under the category of other capital costs were the costs of purchasing chainsaws, aircrafts, helicopters, horses and motors.

An examination of expenditures by region shows that trappers in the Omineca-Peace Region made 45% of total capital expenditures. Capital expenditures by trappers in the Skeena and Kootenay regions were the next largest at 17% and 13%, respectively, of the total. A comparison between registered trapline holders and NRTH trappers showed that over 91% of capital expenditures was made by trappers working registered traplines.

The capital cost category "trapline" was intended to determine the price of traplines purchased for or during the 1986/87 season. However, based on the variation in the values given for this item there appears to have been some confusion about what was intended. The values given for traplines varied from a low of $13 to a high of $25 000 with a fairly even distribution of values

TABLE 5.1 Estimated Total Value of Capital Purchases, 1986-87

	Vancouver Island	Lower Mainland	Thompson-Nicola	Kootenay	Cariboo	Skeena	Omineca-Peace	Okanagan	Totals
1) Trapline	$ 36,580	$ 14,640	$ 96,550	$ 50,640	$126,570	$287,820	$ 583,280	$ 15,440	$1,211,520
2) Cabin or Tent	2,380	41,970	3,760	49,550	5,870	30,610	199,590	1,110	334,840
3) Traps, Pelt Stretchers	12,980	19,640	33,000	34,150	33,880	51,120	117,900	20,680	323,350
4) Snowmobile	830	18,210	89,020	297,360	114,520	213,020	597,620	87,540	1,418,120
5) Dogs	0	360	360	1,230	1,960	2,870	14,300	8,340	29,420
6) Sled/ Toboggan	0	360	560	2,780	3,730	12,520	43,600	0	63,550
7) Stove	0	3,660	2,180	8,110	2,450	12,690	31,780	160	61,030
8) Firearms, Knives, Axes	4,690	18,190	17,650	27,220	16,580	35,590	95,590	11,020	226,530
9) Vehicle, Boat	57,020	64,150	100,860	147,510	48,440	201,860	631,580	107,160	1,358,580
10) Other Costs	9,690	17,720	890	35,340	27,570	58,790	90,690	32,530	273,220
Totals	$124,170	$198,900	$344,830	$653,890	$381,570	$906,890	$2,405,930	$283,980	$5,300,160

over this range. It would appear that a number of NRTH trappers have given the fee or charge that they paid for the right to trap on registered traplines held by other trappers and in some cases the cost of a trapping license. If this is the case, then the estimated costs for the item trapline do not reflect the costs of traplines bought and sold. Rather the category is a combination of trapline purchase prices and trapline rental payments.

5.2 Operating Costs

Provincial trappers incurred annual operating costs for the 1986-87 season of almost 3.3 million dollars. Table 5.2 shows trappers estimated annual operating costs according to region. Not surprisingly, the largest operating cost was for transportation to and from their traplines. This category includes the costs of vehicle operation and maintenance and aircraft rental for trappers who flew to and from their traplines. Transportation costs composed almost one-third of trappers' total operating costs. The second largest type of operating cost was for the repair and maintenance of cabins, tents, traps, tools, snowmobiles, vehicles and other items. This cost category made up almost 20% of trappers' total operating costs. The purchase of food, clothing, footwear, snowshoes and skis for trapping represented about 18% of total operating costs for trappers. For the category of other operating costs, some of the items specified were the costs of conventions, feed for horses, licenses and insurance.

The operating cost category includes the costs of selling pelts as well as the costs of working and maintaining a trapline. Most British Columbia pelts are sold at the Ontario Trappers Association's auction in North Bay and the Trappers International Marketing Service auction in Toronto. A small number of pelts are sold at the Western Raw Fur auction in Vancouver. Trappers may get their pelts to auction by dropping them off with agents of the auction at a number of depots located throughout the province. Trappers without easy access to the depots may ship them directly to the auctions. In addition to the costs of shipping pelts, trappers are subject to a number of charges on the gross auction price of pelts. First, royalties are deducted from the gross auction price. In addition, the auction houses charge a commission of 7% on the value of all pelts sold at auction. Finally, a charge of 1% is levied on the value of British Columbia pelts sold at auction with the proceeds evenly split between the Fur Institute of Canada and the British Columbia Trappers Association.

A comparison of operating costs by region, once more shows the importance of trapping in the Omineca-Peace Region. Trappers in this region incurred over 44% of total operating costs. Furthermore, the vast majority of these types of expenditures were made by holders of registered traplines. Registered trappers incurred over 90% of total operating costs.

TABLE 5.2 Estimated Total Operating Costs, 1986-87

	Vancouver Island	Lower Mainland	Thompson-Nicola	Kootenay	Cariboo	Skeena	Omineca-Peace	Okanagan	Totals
1) Food, Clothing, Footwear, etc.	$ 7,350	$ 21,930	$ 25,390	$ 68,850	$ 39,280	$ 94,590	$ 307,590	$ 18,290	$ 583,270
2) Bait, Lure	1,060	2,750	3,080	6,370	6,900	4,930	19,000	2,680	46,770
3) Ammunition	500	2,270	3,000	5,690	5,940	7,620	20,670	1,760	47,450
4) Wood	890	200	800	8,200	610	3,620	14,460	1,450	30,230
5) Transportation	31,580	53,450	109,060	149,390	105,100	134,980	399,440	54,310	1,037,310
6) Maintenance Repair	7,790	20,040	32,910	90,560	60,290	111,450	294,060	26,880	643,980
7) Shipping	3,090	2,340	4,190	9,890	3,540	7,820	20,290	3,720	54,880
8) Storage	1,100	630	3,280	2,150	2,130	3,890	7,100	1,720	22,000
9) Wages, Salaries	0	5,180	25,480	28,720	19,370	13,270	104,960	30,110	227,090
10) Auction, Sales	10,250	12,330	31,010	50,580	35,630	44,850	186,300	25,040	395,990
11) Association Dues	750	1,820	1,780	9,160	2,120	3,660	7,800	1,590	28,680
12) Interest, Carrying	400	60	7,150	7,920	6,100	7,760	35,450	3,640	68,480
13) Course Fees	1,610	2,350	630	7,870	1,590	1,620	5,140	1,180	21,990
14) Other Costs	780	3,060	160	10,820	3,530	4,810	31,980	7,780	62,920
Totals	$67,150	$128,410	$247,920	$456,170	$292,130	$444,870	$1,454,240	$180,150	$3,271,040

5.3 Average Annual Costs of Trapping

The typical licensed trapper in British Columbia made expenditures directly related to his trapping activity during the 1986-87 season of about $3790. While the costs of trapping varied significantly among the regions and between registered trapline holders and NRTH trappers, this figure represents the average cost province-wide for all active licensed trappers. Of this average cost of trapping, about 62% was for expenditures on capital items and the remainder was for operating costs. The following two sections present the average annual capital and operating costs for trapping during the 1986-87 season.

5.4 Average Annual Capital Costs

Table 5.3 shows the average amounts that active trappers spent on different types of capital items for the 1986-87 season according to region. While the average annual expenditure on capital items province-wide was about $2340, there was a good deal of variation in average expenditures across regions. Trappers in the two northern regions, the Omineca-Peace and Skeena, had average capital costs that were, respectively, 37% and 29% higher than the provincial average. These higher costs may be due to the greater distances that have to be travelled to get to and from traplines and the larger size of traplines in these regions. This results in greater outlays for vehicles, snowmobiles and other capital equipment to get to and work traplines in the north. Also, trappers in the northern regions tend to have larger harvests and therefore require more equipment to produce and process their harvests. At the other extreme, trappers in the Vancouver Island Region had average capital costs that were only about 44% of the provincial average. This may be because trappers in this region more commonly trap for animal control, as shown in section 2.4, than trappers elsewhere and therefore do not face the capital equipment requirements to get to and work an extensive trapline.

Among the costs for different types of capital items, snowmobiles was the largest composing 27% of overall average capital costs. This was followed by the costs of other vehicles and boats, which was about 26% of average costs. The purchase of traplines was the third largest capital expenditure at about 23% of capital costs.

A comparison was made between the average annual capital costs of registered trapline holders and NRTH trappers. Registered trapline holders had average capital costs of over $2900 while the costs for NRTH trappers was about $1050. The major differences were for the costs of purchasing traplines and transportation equipment such as snowmobiles and other vehicles and boats.

TABLE 5.3 Estimated Average Annual Capital Costs, 1986-87

	Vancouver Island	Lower Mainland	Thompson-Nicola	Kootenay	Cariboo	Skeena	Omineca-Peace	Okanagan	Provincial Averages
Traplines	$ 307	$ 111	$ 503	$ 135	$ 478	$ 963	$ 788	$ 111	$ 536
Cabin-Tents	20	318	20	132	22	102	270	8	148
Traps-Stretchers	109	149	172	91	128	171	159	149	143
Snowmobiles	7	138	464	793	432	712	808	630	627
Dogs	0	3	2	3	7	10	19	60	13
Sleds/Toboggans	0	3	3	7	14	42	59	0	28
Stoves	0	28	11	22	9	42	43	1	27
Firearms/Knives/Axes	39	138	92	76	63	119	129	79	100
Vehicles-Boats	479	486	525	393	183	675	853	771	601
Other Capital	81	134	5	94	104	197	123	234	121
Totals	$1,042	$1,508	$1,797	$1,746	$1,440	$3,033	$3,251	$2,043	$2,344

5.5 Average Annual Operating Costs

A typical licensed provincial trapper had annual operating costs of almost $1500 during the 1986-87 season. Table 5.4 shows the average amounts that active trappers spent on different types of operating costs for the 1986-87 season according to region. As was the case for average capital costs, the greatest operating costs were incurred by trappers in the Omineca-Peace and Skeena regions. Again, this is probably largely due to the higher costs involved in travelling greater distances and supplying larger traplines than found in the southern regions. The lowest average operating costs were for trappers in the Vancouver Island Region. As explained above, trappers in this region are more likely to be trapping for wildlife control and travelling shorter distances and therefore incurring lower operating costs.

Among the types of operating costs, transportation was the most significant composing about 32% of annual operating costs. The costs of maintaining and repairing cabins, tents, traps, tools, snowmobiles, vehicles, etc. was the second largest type of operating cost making up almost 20% of the total. The cost of food, clothing, footwear, snowshoes and skis was the third largest type of operating cost at 18% of the total.

The operating costs for the typical registered trapline holder was over $1000 more than for NRTH trappers. The average annual operating costs were about $1750 for registered trappers and $730 for NRTH trappers. Much of this difference is explained by the higher costs incurred by registered trappers for transportation; food, clothing and footwear; maintenance and repair; and auction costs.

5.6 Impacts of Trappers' Expenditures on the Provincial Economy

The capital and operating expenditures made by trappers stimulate economic activity throughout the provincial economy. That is, spending on trapping not only affects the business sectors that trappers immediately deal with but also has repercussions or ripple effects that are felt throughout the provincial economy. This section reports the impacts of trappers' spending on different measures of activity in the provincial economy.

The impacts of trappers' expenditures on the provincial economy were estimated using the British Columbia Input Output Model (BCIOM) by the Central Statistics Bureau of the Ministry of Economic Development. The BCIOM provides a complete and detailed description of the production and distribution of all goods and services in the provincial economy. For any good or service produced by the provincial economy, the model shows what inputs are required to produce it, and once produced, how the good or service is used. The BCIOM can be manipulated to show how expenditures in one sector of the economy have repercussions or ripple effects throughout the economy.

TABLE 5.4 Estimated Average Annual Operating Costs, 1986-87

	Vancouver Island	Lower Mainland	Thompson-Nicola	Kootenay	Cariboo	Skeena	Omineca-Peace	Okanagan	Provincial Averages
Food, Clothing, Footwear, etc.	$ 62	$166	$ 132	$ 184	$ 148	$ 316	$ 416	$ 132	$ 258
Bait, Lure	9	21	16	17	26	16	26	19	21
Ammunition	4	17	16	15	22	26	28	13	21
Wood	8	2	4	22	2	12	20	10	13
Transportation	265	405	568	398	397	451	540	391	459
Maintenance, Repair	66	152	171	242	228	373	397	193	285
Shipping	26	18	22	26	13	26	27	27	24
Storage	9	5	17	6	8	13	10	12	10
Wages, Salaries	0	39	133	75	73	44	142	217	100
Auction, Sales	86	93	162	135	135	150	252	180	175
Association Dues	6	14	9	24	8	12	11	11	13
Interest, Carrying	3	1	37	21	23	26	48	26	30
Course Fees	14	18	3	21	6	5	7	8	10
Other Costs	7	23	1	29	13	16	43	56	28
Totals	$565	$974	$1,291	$1,215	$1,102	$1,486	$1,967	$1,295	$1,447

There are usually three types of effects of expenditures on the economy identified in an impact analysis. The first is the direct effects. These are the income and employment created or supported in those sectors of the economy that directly or immediately supply trappers. For example, trappers' purchases of equipment and ammunition support employment and income in the retail sector. This employment and income represents the direct effect of expenditures on trapping. However, for retailers to supply trappers with ammunition and equipment, they (the retailers) must purchase goods and services from other sectors. The most obvious examples of sectors servicing the retailer would be manufacturers and wholesalers of trapping equipment. In addition, the retailer must purchase business services, legal services, financial services, etc. in order to operate his business. The sectors supplying the retailer can be thought of as indirectly supplying trappers and the resulting employment and income supported in these sectors represent the indirect effects of trapper expenditures. Finally, the incomes earned by those employed in directly and indirectly supplying trappers are partially spent on provincially produced goods and services which induces a further round of employment and income throughout the economy. The employment and income supported at this stage are known as the induced effects of trappers' expenditures. The sum of the direct, indirect and induced effects represents the total impacts of expenditures on the provincial economy. Taking into account these three types of effects, trappers' expenditures stimulate activity in sectors of the economy that would appear to be very far removed from trapping.

Table 5.5 summarizes the estimated impacts of trappers' expenditures on different measures of activity in the provincial economy. Man-years of employment refer to the number of people employed in British Columbia for the equivalent of a full working year. Gross Domestic Product (GDP) is a measure of the value of the final demand goods and services produced within the borders of British Columbia. The value of goods and services sold at the manufacturers' or wholesalers' level are not included in this measure since they go through further processing and become incorporated in the value at the retail level. The impacts on household income refer to the value of wages and salaries received by provincial households that are supported by expenditures on trapping. Household income is defined to include wages and salaries, supplementary labour income and income of unincorporated business.

One important feature of the economic impacts of trappers' expenditures not shown in Table 5.5 is that most of these effects are spread throughout rural parts of the province where alternative forms of employment are frequently quite limited. With only about 4% of expenditures on trapping made by trappers working in the Lower Mainland, the vast majority of the economic impacts of trapping are felt throughout the rest of the province and especially in the north.

TABLE 5.5 Impacts of Trappers' Expenditures on the Provincial Economy

Man years of employment	84
Provincial gross domestic product (gdp)	$3,142,000
Household income	$1,937,000

CHAPTER 6. Estimated Revenue from Trapping

6.1 Revenue From Pelt Sales

The main source of revenue for provincial trappers is from the sale of pelts at auction. Most British Columbia fur pelts are sold at the auctions located in Toronto and North Bay. The first column of Table 6.1 shows the average auction prices paid for British Columbia fur pelts during the 1986-87 season. Lynx pelts brought the highest price of any species even though its 1986-87 price was over $100 lower than the previous two seasons. The second highest average pelt price was received for bobcat. The 1986-87 price of bobcat pelts was more than double its price in the previous two years. The price paid for marten pelts in 1986-87 reached an all-time high and was almost double its price of the previous season. Similarly, beaver pelts brought in their highest price since the 1979-80 season. In summary, it appears that the prices paid for most of the important species was quite favourable in 1986-87.

The second column of Table 6.1 shows the estimated gross revenue derived from the sale of fur pelts during the 1986-87 season. As can be seen from the table, marten is the species that accounts for the greatest share of gross revenues. It is estimated that marten produced over 55% of total gross revenue from pelt sales. In the 1984-85 season, the sale of marten pelts accounted for a very similar share of trappers' total revenue although its importance was somewhat less in the 1985-86 season. Beaver was the second largest revenue producer making up over 13% of the revenue from the sale of pelts. Lynx was the third largest source of revenue accounting for almost 11% of the sale value of pelts. The relative importance of lynx has declined compared to the 1985-86 and 1984-85 seasons when it produced 24% and 22%, respectively, of trapper revenue.

Table 6.2 shows the estimated gross revenue from pelt sales according to region. Approximately 45% of revenue from pelt sales was earned by trappers from the Omineca-Peace Region. Trappers from the Kootenay and Cariboo regions accounted for about 12% each of total gross revenue. In all regions of the province, the sale of marten pelts was the largest source of revenue for trappers. Only in the Lower Mainland Region does revenue from the sale of beaver pelts approach that from marten sales. The final row in the table shows the average gross revenue per active trapper for each region. The average gross revenue of trappers from the Omineca-Peace Region was 38% above the provincial average whereas revenue for trappers in the Lower Mainland Region was only 47% of the provincial average.

TABLE 6.1 Estimated Revenue from Pelt Sales, 1986-87

	AVERAGE AUCTION PRICES	GROSS REVENUE
Beaver	$ 44.41	$1,171,630
Black bear	55.44	50,400
Bobcat	402.01	194,570
Coyote	65.20	438,990
Fisher	280.13	229,710
Fox	42.46	43,310
Lynx	540.75	954,970
Marten	108.66	4,864,490
Mink	59.47	398,330
Muskrat	4.00	86,750
Otter	51.08	66,710
Raccoon	14.52	26,340
Skunk	2.00	810
Squirrel	0.83	44,120
Weasel	3.65	46,020
Wolf	59.31	58,480
Wolverine	183.58	99,870
TOTAL		$8,775,500

6.2 Revenue From the Sale of Castors, Galls and Claws

In addition to the revenue from the sale of fur pelts, trappers earned income from the sale of castors, bear galls and bear claws. During the 1986-87

TABLE 6.2 Estimated Revenue from Pelt Sales by Region, 1986-87

	Vancouver Island	Lower Mainland	Thompson Nicola	Kootenay	Cariboo	Skeena	Omineca Peace	Okanagan	Total
Beaver	$ 29,000	$ 53,560	$ 65,590	$ 75,810	$ 201,710	$152,420	$ 535,810	$ 57,730	$1,171,630
Black bear	1,050	1,660	2,330	2,940	7,260	4,110	28,390	2,660	50,400
Bobcat	0	40,600	30,550	23,320	8,440	23,320	10,450	57,890	194,570
Coyote	0	13,430	55,940	43,810	82,350	25,820	145,790	71,850	438,990
Fisher	0	840	34,460	560	66,390	24,650	101,410	1,400	229,710
Fox	0	0	3,610	210	14,820	8,920	15,540	210	43,310
Lynx	0	1,620	94,630	51,910	88,140	95,720	507,230	115,720	954,970
Marten	299,360	62,050	350,210	786,700	444,310	428,230	2,304,130	189,500	4,864,490
Mink	54,950	25,930	26,110	21,760	81,180	40,140	133,630	14,630	398,330
Muskrat	1,660	26,300	8,690	4,660	17,570	5,020	20,710	2,140	86,750
Otter	8,430	4,650	3,880	2,710	6,230	10,170	29,010	1,630	66,710
Raccoon	14,610	8,730	360	360	350	770	0	1,160	26,340
Skunk	60	120	290	100	20	20	40	160	810
Squirrel	80	280	3,370	1,960	7,960	5,190	23,780	1,500	44,120
Weasel	150	530	2,960	3,960	8,110	5,910	21,800	2,600	46,020
Wolf	3,080	360	6,050	3,140	2,730	6,530	36,590	0	58,480
Wolverine	0	1,650	1,470	23,130	5,880	13,200	50,670	3,850	99,870
Region Totals	412,430	242,310	690,500	1,047,040	1,043,450	850,160	3,964,980	524,630	8,775,500
Average Revenue Per Trapper	$3,466	$1,836	$3,596	$2,792	$3,938	$2,843	$5,358	$ 3,774	$ 3,881

season, castors sold at auction for a price of $15 per pound. While the price of bear galls varies depending upon their size and preparation, an average price for a bear gall was about $20 in 1986-87. An average size of a bear gall was about 5 grams. Bear claws sold for $30 a set or $1.50 each.

Table 6.3 shows the estimated gross revenues that trappers received from the sale of castors, galls and claws in 1986-87 by region. The sale of bear galls was a fairly significant source of revenue exceeding the amount of revenue produced by the sale of pelts of 10 of the 17 furbearers listed in Table 6.1. At a selling price of about $4 per gram, bear galls would appear to produce a very high rate of return for trappers. The returns on castors and bear claws appear to be much lower. The bottom row of the table, which shows the average revenue of trappers selling castors, galls or claws, confirms the high returns on bear galls. Approximately 75% of the combined revenue from the sale of castors, galls and claws was earned by trappers from the Omineca-Peace Region.

6.3 Imputed Value of Human and Animal Food

As was shown in Table 4.5, trappers use large quantities of trapped animals for food for human and animal consumption. Although this does not directly represent earned income for trappers, it does increase their discretionary income insofar as it reduces cash outlays on necessary food. The species most commonly used for human consumption are beaver and lynx and, if available, muskrat. Beaver can be thought of as a substitute for pork while lynx is similar to fowl. The retail price of pork roast is about $2.00/lb. and for fowl the price is about $1.40/lb. Since most of the food consumed by trappers is beaver, the replacement value of the furbearers used for human consumption is set at a price of $1.90 per pound. Beaver is the species primarily used to feed dogs. The value of this food was determined by assuming that dogs would otherwise have been fed dog food and scrap meat at a cost of $1 per pound.

Table 6.4 shows the estimated value of furbearers used for human and animal consumption. The total estimated value of furbearers used for food approaches $200 000. The significance of this value can be seen by comparing it to the gross revenues from the sale of different types of pelts. Of the seventeen species sold at auction shown in Table 6.1, only six produced gross revenue that exceeded the food value of furbearers. As shown in the last row of the table, trappers who used furbearers for human consumption reduced their food costs by over $130 each on average while trappers feeding furbearers to dogs reduced their dog food costs by an average of almost $180.

6.4 Net Revenue From Trapping

This section compares trappers' gross revenues to their costs to produce a measure of the net revenue or profitability of trapping. In assessing the

TABLE 6.3 Estimated Revenue from the Sale of Castors, Galls and Claws, 1986-87

	CASTORS	GALLS	CLAWS	TOTALS
Vancouver Island	$ 520	$ 0	$ 120	$ 640
Lower Mainland	850	1,600	0	2,450
Thompson-Nicola	1,130	3,510	300	4,940
Kootenay	630	2,580	90	3,300
Cariboo	2,330	8,200	600	11,130
Skeena	3,340	5,880	1,590	10,810
Omineca-Peace	11,130	93,890	5,810	110,830
Okanagan	1,070	1,350	780	3,200
Totals	$21,000	$117,010	$9,290	$147,300
Average Revenue Per Trapper	$ 46	$ 413	$ 58	

TABLE 6.4 Estimated Value of Human and Animal Food Consumption, 1986-87

	HUMAN CONSUMPTION	ANIMAL CONSUMPTION	TOTAL FOOD VALUE
Vancouver Island	$ 2,540	$ 1,580	$ 4,120
Lower Mainland	4,280	5,160	9,440
Thompson-Nicola	1,450	8,450	9,900
Kootenay	2,180	5,210	7,390
Cariboo	4,260	16,940	21,200
Skeena	16,200	12,680	28,880
Omineca-Peace	34,350	72,110	106,460
Okanagan	3,830	5,980	9,810
British Columbia	$69,090	$128,110	$197,200
Average Value Per Trapper	$131	$179	

profitability of trapping in the Province it must be remembered that trappers are not a homogeneous group motivated solely by the income to be earned from trapping. Rather some trap for recreation, tradition or animal control and not for the purpose of generating income. Also, among those who do trap for a livelihood there appears to be a good deal of variation in the amount of effort devoted to trapping and dependence on trapping as a source of income. Therefore, any evaluation of the profitability of trapping in the Province must make allowance for these differences among trappers.

To determine the net revenue from trapping, the purchase price of some types of capital equipment shown in Table 5.1 must be adjusted. This is because large capital equipment such as snowmobiles and vehicles provide productive services for a number of years and are likely to be paid for over time. Therefore, it would be misleading to attribute the full purchase price of such equipment to the costs of trapping for a single year. It is more appropriate to treat the purchase of large capital equipment as if they were paid for over time with the size of the annual payments determined by the process of "amortization". This shows the equal annual amounts that would have to be paid in interest and principal to pay off a loan over given time period at a fixed interest rate.

The capital values of traplines, snowmobiles, and vehicles and boats from Table 5.1 were amortized to determine the equal annual amounts required to pay for them over a 5-year period at an interest rate of 10%. In the case of traplines, only the costs of traplines given by registered trapline holders was amortized. The values of the remaining types of capital equipment listed in Table 5.1 were not amortized since they are likely to be fully paid for at the time of purchase. The amortized costs of traplines, snowmobiles, and vehicles and boats are shown in Table 6.5 along with the remaining capital costs.

The amortized annual capital costs were added to the annual operating costs of trapping from Table 5.2 to give the estimated total cost of trapping for 1986-87 shown in the first column of Table 6.6. The second column of the table shows the total revenue from trapping, which is the sum of revenues from the sales of pelts, castors, galls and claws plus the imputed food value of furbearers. The net revenue from trapping shown in the third column is the difference between total revenues and total costs. The final column of the table shows the average net revenue per active licensed trapper in each region.

The total net revenue earned by licensed trappers in British Columbia during the 1986-87 season approached 3.5 million dollars with almost one-half of this total going to trappers in the Omineca-Peace Region. One of the most striking features of the net revenue estimates is the amount of variation from region to region in average net revenue per trapper. The typical trapper in the Lower Mainland Region spent more to trap than he brought in as revenue from trapping. This result probably occurred because most of trappers in this

TABLE 6.5 Amortized Annual Capital Costs of Trapping

	TRAPLINES	SNOWMOBILES	VEHICLES BOATS	OTHER CAPITAL	TOTALS
Vancouver Island	$ 11,290	$ 200	$ 15,040	$ 29,740	$ 56,290
Lower Mainland	4,520	4,800	16,920	101,900	128,140
Thompson-Nicola	29,810	23,480	26,610	58,400	138,300
Kootenay	15,630	78,450	38,910	158,380	291,370
Cariboo	39,070	30,210	12,780	92,040	174,100
Skeena	88,850	56,200	53,250	204,190	402,490
Omineca-Peace	180,070	157,650	166,610	593,450	1,097,780
Okanagan	4,770	23,090	28,270	73,840	129,970
British Columbia	$374,010	$374,100	$358,390	$1,311,940	$2,418,440

TABLE 6.6 Estimated Net Revenue from Trapping, 1986-87
(Brackets indicate negative values)

	TOTAL ANNUAL COSTS	TOTAL ANNUAL REVENUES	NET ANNUAL REVENUES	NET REVENUE PER TRAPPER
Vancouver Island	$ 123,440	$ 417,190	$ 293,750	$2,470
Lower Mainland	256,550	254,200	(2,350)	(18)
Thompson-Nicola	386,220	705,340	319,120	1,660
Kootenay	747,540	1,057,730	310,190	830
Cariboo	466,230	1,075,780	609,550	2,300
Skeena	847,360	889,850	42,490	140
Omineca-Peace	2,552,020	4,182,270	1,630,250	2,200
Okanagan	310,120	537,640	227,520	1,640
British Columbia	$5,689,490	$9,120,000	$3,430,510	$1,520

region were NRTH who trapped for recreation, tradition and wildlife control rather than to earn income. Perhaps more surprising is the low average net return earned by trappers in the Skeena Region. Trappers in this region tended to incur very high costs of trapping due to distances travelled and sizes of areas worked while bringing in relatively modest amounts of revenue. As can be seen from Table 3.1, trappers in the Skeena Region harvested below the provincial averages for most species. On the other hand, although trappers in the Vancouver Island Region had below average gross revenues, they had above average net revenues because of their very low costs of trapping.

CHAPTER 7. TRAPPER COMMENTS

Space was provided on the questionnaire for trappers to express any concerns they had about trapping or to make suggestions for improving trapping. Trappers were instructed to enclose additional pages if the space provided was insufficient. A significant proportion of trappers took the opportunity to make comments about many issues affecting trapping conditions. The number of times trappers commented on a specific topic and the percent that this represents of the total number of comments is listed below. As can be seen from the list, the loss of habitat due to logging was the primary concern of trappers.

CATEGORY	NUMBER	PERCENT
1. Habitat loss - logging	90	26.0%
2. Better control over poaching	24	6.9
3. Hunters taking furbearers	23	6.6
4. Need for public education	16	4.6
5. Use or lose trapline	16	4.6
6. Compensation for logging losses	16	4.6
7. Cougar hound problems	15	4.3
8. Problems with herbicide spraying	12	3.5
9. Improved trapper education	11	3.2
10. Improve wildlife management	11	3.2
11. Improve resource planning and development	10	2.9
12. Shorten or close seasons	9	2.6
13. Improve trapping methods	9	2.6
14. Problem of slash burning	8	2.3
15. Traplines too small	8	2.3
16. Quota on lynx	7	2.0
17. Too many private traplines	6	1.7
18. Overtrapping	6	1.7
19. Better distribution of information	4	1.2
20. More research needed	3	.9
21. Overcrowding	3	.9
22. Management of wolves	3	.9
23. Regulations out earlier	3	.9
24. Miscellaneous	33	9.5
	346	100.0

APPENDIX 1

TRAPPER SURVEY

Dear Trapper:

The effective management of wildlife begins with good information about the resource and the people who use it. Estimates of the amount and value of trapping in British Columbia are presently very limited. This survey is being undertaken by the Wildlife Branch in cooperation with the trappers of British Columbia to fill this gap. The information from this survey will make it possible to give a fuller and more realistic picture of trapping as an economic activity and a way of life.

We need help from you the trapper to make our efforts successful. Please take the time to complete this questionnaire and return it to us in the postage paid envelope enclosed. There is no need to place your name on the questionnaire or in any other way identify yourself since all returned questionnaires are to be anonymous.

Thank you for your cooperation.

J. H. C. Walker, Director,
Wildlife Branch,
Ministry of Environment.

1. (a) How many years have you been trapping?
_____ years

(b) How many years have you been trapping in British Columbia?
_____ years

2. (a) Do you have a trapline registered in your name?

Yes _____ No _____

(b) If yes to part (a), how long have you held your present trapline?

_____ years

3. What is the <u>main</u> purpose of your trapping? (Please check one)

(i) _____ livelihood
(ii) _____ recreation
(iii) _____ wildlife control
(iv) _____ tradition
(v) _____ other (please specify) _____

4. (a) Did you trap in British Columbia during the 1986-87 season?
Yes _____ No _____ (If no please return the questionnaire in the postage-paid return envelope provided)

(b) In which region(s) of the Province did you trap? (see map)

Region Number ☐☐☐

5. For each of the following species, please estimate the number of animals you trapped or shot as furbearers during the 1986-87 season.

	Number Trapped or Shot		Number Trapped or Shot
Beaver	____	Muskrat	____
Black bear	____	Otter	____
Bobcat	____	Raccoon	____
Coyote	____	Skunk	____
Fisher	____	Squirrel	____
Fox	____	Weasel	____
Lynx	____	Wolf	____
Marten	____	Wolverine	____
Mink	____		

6. Please indicate the number of pelts sold to different types of buyers for the 1986-87 season.
(i) ____ travelling fur buyer
(ii) ____ auction house
(iii) ____ private buyer
(iv) ____ taxidermist

7. Did you sell any of the following from the 1986-87 season?
(i) Castors (castoreum): Yes ____ No ____
If yes, how many grams did you sell? ____ grams sold
(ii) Bear galls: Yes ____ No ____
If yes, how many grams did you sell? ____ grams sold
(iii) Bear claws: Yes ____ No ____
If yes, how many bear claws did you sell? ____ number sold

8. (a) Did you use any trapped animals for
(i) food for human consumption: Yes ____ No ____
(ii) food for domestic animals: Yes ____ No ____
(iii) feeding stations: Yes ____ No ____
(iv) bait: Yes ____ No ____

(b) If trapped animals were used for food, please estimate the number of pounds used for
(i) human consumption ____ pounds
(ii) domestic animals ____ pounds

9. Please estimate your trapping costs for the 1986-87 season according to the following categories. (Please state your cost estimates to the nearest dollar. If you had no costs for an item, place a zero in the space beside the item.)

A. Capital Costs (items bought during or for the 1986-87 trapping season)

1. Trapline 1. _____
2. Cabin or tent 2. _____
3. Traps and pelt stretchers 3. _____
4. Snowmobile 4. _____
5. Dogs 5. _____
6. Sled/Toboggan 6. _____
7. Stove 7. _____
8. Firearms, knives, axes 8. _____
9. Vehicle/boat purchase 9. _____
(a) Type of vehicle/boat _____
(b) Percent of use for trapping _____
10. Other costs (please specify type) _____ 10. _____

B. Operating Costs (trapping expenses made each year)

1. Food, clothing, footwear, snowshoes and skis 1. _____
2. Bait and lure 2. _____
3. Ammunition 3. _____
4. Wood 4. _____

B. Operating Costs (trapping expenses made each year) (Cont'd)

5. Transportation to/from trapline (such as gas, oil, etc.) 5. _____
6. Maintenance and repair (of cabins, tents, traps, tools, snowmobiles, other vehicles, etc.) 6. _____
7. Shipping of pelts (postage, insurance, etc.) 7. _____
8. Storage (freezer) 8. _____
9. Wages and salaries (paid to hired help) 9. _____
10. Auction/sales costs (commissions, royalties, etc.) 10. _____
11. Association dues 11. _____
12. Interest or carrying costs 12. _____
13. Trapper education course fees 13. _____
14. Other costs (please specify type) _____ 14. _____

Additional comments (such as how to improve trapping or concerns you have about trapping). If more space is required please feel free to enclose additional pages.

_____

_____

_____

Thank you for your time and cooperation.

Wildlife Working Reports should not be cited because of the preliminary nature of the data they contain

WR-1 Progress report - coastal grizzly research project: Year 1. A.N. Hamilton. First printed October 1984, revised October 1986. 32pp. (Also printed as WHR-9).

WR-2 Progress report - year 2 - 1983, working plan - year 3 - 1984. Coastal grizzly research project. A.N. Hamilton and W.R. Archibald. First printed October 1984, revised October 1986. 32pp. (Also printed as WHR-10).

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WR-6 Kechika Enhancement Project of northeastern B.C.: wolf/ungulate management. 1983-84 annual report. J.P. Elliott. October 1984. 25pp.

WR-7 Muskwa Project working plan. J.P. Elliott. December 1984. 32pp.

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WR-9 Kechika Enhancement Project of northeastern B.C.. Revised working plan for 1984-87. J.P. Elliott. December 1984. 12pp.

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WR-20 Kechika Enhancement Project of northeastern B.C.: wolf/ungulate management. 1985-86 annual report. J.P. Elliott. December 1986. 17pp.

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WR-23 Critical habitat of caribou (*Rangifer tarandus caribou*) in the mountains of southern British Columbia. K. Simpson, K. Hebert, and G.P. Woods. February 1987. 13pp.

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WR-24 Impacts of a hydro-electric reservoir on populations of caribou and grizzly bear in southern British Columbia. K. Simpson. February 1987. 40pp.

WR-25 The effects of snowmobiling on winter range use by mountain caribou. K. Simpson. February 1987. 15pp.

WR-26 Quesnel Highlands wolf control project. D. Hebert. January 1987. 10pp.

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WR-29 Habitat survey of the Mackenzie Heritage Trail corridor. V. Hignett. June 1987. 21pp + 5 maps.

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WR-31 Wildlife habitat suitability of the Mackenzie Heritage Trail corridor. V. Hignett. May 1988. 16pp + 6 maps.

WR-32 Research priorities for furbearers in British Columbia. D. Blood. June 1988. 49pp.

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WR-34 A lynx management strategy for British Columbia. D.F. Hatler. July 1988. 121pp.

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WR-36 Explanatory legend for vegetation maps of the Kamloops Lake bio-physical study area. E.C. Lea. December 1988. 78pp.

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